M/035/012

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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December 6, 1995

Lawnie Mayhew
Harper Contracting, Inc.
P.O. Box 18400
Kearns, Utah 84118

Re: Initial Review of Notice of Intention to Commence Large Mining Operations (NOI-LMO), Harper Contracting, Inc (Harper), Parley's Canyon Quarry, M/035/012, Salt Lake County, Utah

Dear Mr. Mayhew:

The Division has completed a review of your NOI-LMO submission prepared by JBR Environmental Consultants, Inc. received July 20, 1995. After reviewing the information, the Division has the following comments which will need to be addressed. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

R647-4-105 Maps, Drawings & Photographs

105.2 Surface facilities map

Plate One in this submission shows the disturbances which were in existence prior to Harper's operations. Plate Two shows the configuration of the current operations (small mine operation). Plate Three shows the proposed final pit and road configuration. Plate Four shows the areas to be rehabilitated (revegetated). None of the four maps submitted clearly identify the total disturbance associated with the current mine proposal. Please provide a map which identifies the total disturbed area associated with the proposed operation or modify an existing map to show this disturbance by means of cross hatching or a border. This total disturbed area would include the existing small mine disturbed area and the other areas proposed under the large mine permit. Areas measured off this map should agree with those areas referenced in the text description of the reclamation activities. AAG

R647-4-106 Operation Plan

106.3 Estimated acreages disturbed, reclaimed, annually

Page seven of the submission, describes the disturbed areas as follows: *This area is within the northwest boundaries of the previously disturbed areas (see Plate 1). The area in plan view,*

currently measures approximately one and one half acres. The mined material is pushed to the edge of a slope where it runs down a natural grade to the existing quarry pit floor. The area of this slope in plan view is approximately 1.25 acres. Each operating year the surface area will increase. The amount of increase in surface area is dependent upon market demands for the limestone. The final area of the pit will be approximately 13 acres. All new mining will be completed within the boundaries of areas previously disturbed. Plates 3 and 4 of this Notice of Intention show the current and future areas to be disturbed by these proposed operations.

The processing facilities, stockpiles, equipment operating areas and scales would be located in the previously disturbed area of the existing quarry pit floor and truck loadout area. The total area for these activities is approximately 4.5 acres (see plate 2).

The pit access roads starting from the frontage road to the pit are estimated to cover approximately 3 acres. Approximately one half of this area is on an existing road constructed mostly on United States Forest Service property. The remainder of the area to be covered by pit access roads will be newly constructed roads, mostly on private land owned/operated by the companies listed in section 1.0 of this Notice of Intention.

This description of the disturbed area breakdown is unclear and does not allow for easy tabulation of the total proposed disturbance. This narrative section may be easier to follow when combined with a revised map of the disturbed areas as requested above. Please provide a table of the disturbed areas for the various features at this mine site to clarify the description of disturbed acreages. Categories in this table would describe the features at the site such as stockpiles, loadouts, roads, pit floors, pit highwalls, etc. Please break the disturbances associated with these features into two main categories: (1) previously disturbed areas which will be redisturbed by the existing small mine operations and the proposed large mining operations, (2) previously undisturbed areas which will be disturbed by this mining operation. An example of a table is provided below. You may modify the table format as you feel necessary. The areas shown in the table should be identified on the appropriate drawing(s) with borders to allow for easy measurement.

FEATURE	TOTAL AREA	PRE-EXISTING DISTURBANCE	NEW DISTURBANCE	AREA TO BE RECLAIMED
access road	5.0	3.0	2.0	2.0
ore slide (slope)	2.5	2.5	0	0
pit floor	4.0	4.0	0	4.0
TOTALS	11.5	9.5	2.0	6.0

Please add labels and borders/cross hatching on Plate Four to identify those roads or other features which existed prior to this operation which will not be reclaimed as part of the final reclamation. AAG

106.4 Nature of materials mined, waste & estimated tonnages

Page 7, section 4.4 of the submission mentions that a small percentage of the material mined will not meet product specifications as a salable product. This material will remain in the quarry pit floor and be spread evenly on the quarry during reclamation. What is the estimated percentage per mined ton, or the estimated final volume of this reject material which will be spread? What will be the particle size(s) of this material? AAG

106.7 Existing vegetation-species and amount

Page 8, section 4.7 of the submission states the areas to be re-disturbed are essentially not vegetated, and, therefore, rule R647-4-111 is not applicable to this operation. The Division agrees that the existing disturbances are, for the most part, barren of vegetation, and, therefore, the percentage of pre-mining vegetative cover is zero. While this implies that revegetation success is achieved by establishing 70% of zero vegetative cover, the Division will require the application of revegetation treatments on all areas impacted by the proposed operations which are safely accessible to equipment. Also see comments in section R647-4-112 Variances. AAG

R647-4-109 Impact Assessment

109.4 Slope stability, erosion control, air quality, safety

The proposed use of ripping along the contour, adequate surface roughness and the proper reclamation of roads should control erosion, but the plan needs additional discussion on slope reclamation. Please provide additional information describing the length of reclaimed slopes (breaking up slope length decreases erosion), and the regrading methodology (what will be done to create surface roughness on the slope). TM

The submission did not contain a section addressing the projected impacts of mining operations on slope stability. The variance section briefly discusses highwalls, but not slopes. The Division is aware of the steepness of the terrain in the project area and the existing talus slopes; however, no information has been provided characterizing the existing slopes or the possible impacts to these slopes. Will the proposed operation have an impact on slopes in the project area? Will existing slopes be increased in length and height or reduced? Will the stability of these slopes be affected by the proposed operations? Will slopes leading down to the freeway be impacted by the proposed operation? What actions have been or will be taken to mitigate these impacts?. If there will be no impacts to the stability of the slopes in the project area please describe why. AAG

R647-4-110 Reclamation Plan

110.2 Roads, highwall, slopes, drainages, pits, etc. reclaimed

Page 15 of the submission states that angle of repose fill slopes will be regraded where possible to 3h:1v to reduce runoff velocity and erosion potential. Please describe any angle of repose areas which will not be possible to regrade to 3h:1v. Please identify these areas on the reclamation treatments (rehabilitation) map. AAG

Please modify Plate 4 of the submission to include the location of drainages which have been rerouted as a result of final reclamation. TM

110.5 Revegetation planting program

While the operator does not intend to seed the mine benches, the Division will require seeding, mulching and fertilizing of all benches that are accessible, unless these benches are solid rock. The reclamation plan will need to include a revegetation provision to this extent. Also, any available fines that are left should be placed on accessible benches at a minimum 1-foot depth.

Item 9, page 15 of the submission describes the proposed revegetation treatments. These treatments include the application of a diammonium phosphate fertilizer applied at a rate of 160 pounds per acre, followed by broadcast seeding the mix at 11.5 pounds per acre, followed by dragging a chain over the seeded areas, followed by mulching with alfalfa hay or manure at a rate of 4-5 tons per acre. The Division suggests that after broadcasting the seed, the area not be dragged. Dragging the area would reduce the surface roughness creating a smoother surface which can reduce water retention and increase surface runoff. The Division recommends that the manure mulch be used at a minimum 5 ton (dry) or 10 ton (wet) per acre. If alfalfa hay is used, the rate should be 2-3 ton per acre and the operator will need to provide a means of anchoring the hay to the soil surface (i.e. crimping, netting, etc.). LMK

R647-4-112 Variances

R647-4-111 Highwalls

Page 16, section 8.0 of the submission requests a variance for highwalls. The justification provided for this request is that regrading the highwalls to 45° should not be required because they are located within an overall setting of similar highwalls with relative stability demonstrated by their age. The submission states that these small highwalls would blend visually with the other existing highwalls and they would not contribute to unstable slope conditions and would not be a safety hazard due to the post mining limitations on public access. Please quantify the term "small" in reference to the highwalls which are included in this variance request by describing the length and vertical height

of these highwalls. Please identify the location of these highwalls on the appropriate map(s). Please identify the existing similar highwalls in the overall setting on the appropriate map(s) and also describe their length and vertical height. AAG

R647-4-111 Topsoil Redistribution

Page 16, section 8.0 of the submission requests a variance from topsoil redistribution. Justification for this request is that topsoil is not available in the areas to be re-disturbed by the proposed operations, and with no topsoil available for salvage there will be no topsoil available for redistribution. The Division acknowledges that the areas which were disturbed prior to Harper's operations did not salvage topsoil. The Division will grant a variance from rule R647-4-111.12 for those areas which were disturbed prior to Harper's operations which will be re-disturbed. New disturbances created by this operation on previously undisturbed lands are not included in this variance, unless Harper can demonstrate that soils are not salvageable in those areas due to the lack of soil cover or equipment inaccessibility due to safety concerns. AAG

R647-4-111 Revegetation

Page 16, section 8.0 of the submission requests a variance from meeting the Division's 70% revegetation success standard of the premining cover. Justification for this request is that the areas proposed to be re-disturbed are essentially not vegetated at the present time. The success of the proposed revegetation treatment should be qualitatively based on the overall setting within the larger quarry. This section also states that the mining benches are not proposed to be revegetated. The Division acknowledges that the areas proposed to be redisturbed are essentially barren of vegetation. Because of this lack of pre-existing vegetation, the Division will grant a variance to rule R647-4-111.13.11 (the 70% revegetation success standard). Granting this variance will not release Harper from complying with rule R647-4-11.13.12. The Division will require the application of appropriate revegetation treatments to those areas which are safely accessible (pit floors, benches, roads, etc.) which also have some type of soil material for a seedbed (not solid rock). AAG

R647-4-113 Surety

In general, the surety calculations provided in the submission are acceptable. A few line items are missing from the calculations which will need to be included. The Division has modified the Harper's surety estimate to include the missing items. A line item of general site cleanup and trash removal was included for the reclaimed area. A line item of supervision during the reclamation /revegetation work for an estimated four days was included. The surety subtotal was increased by a 10% contingency. The new total was then escalated five years into the future using an escalation factor of 2.68% (0.0268). A copy of the modified surety estimate is attached. Please inform us of any concerns you have with this modified estimate. The amount of reclamation surety to be required by the Division is $37,500 in terms of the year 2000 dollars. Please let us know what form of

reclamation surety Harper wishes to post so that we may send you the appropriate forms. In addition to completing the surety forms, Harper will need to complete a Reclamation Contract (Form MR-RC). A copy of form MR-RC is enclosed along with a guideline for its completion. These two documents will need to be completed and returned to the Division after this plan receives tentative approval.

Thank you for your cooperation and assistance in completing this permitting action. The Division will suspend the review of this permit application until we receive your response to the comments listed in this letter. We anticipate being able to grant tentative approval of this permit application after receiving a satisfactory response to these comments. In order for the amount and form of reclamation surety to be scheduled for the January 24, 1996 Board Hearing, we will need to reach a tentative approval decision by December 22, 1995. If you have any questions regarding this letter, or the anticipated time frame for the permit approval process, please contact me, or Tony Gallegos of the Minerals Staff.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Reclamation Program

jb
Attachment: DOGM revised surety estimate
Enclosures: Reclamation Contract (form MR-RC) & Guideline
cc: Doug Jones, JBR w/attachment
M35-12.LET

RECLAMATION ESTIMATE
Harper Contracting Inc. last revision 11/30/95
Parley's Canyon Quarry filename M35-12.WB2 page "ESTIMATE"
M/035/012 (ML-45599) Salt Lake County
Prepared by Utah State Division of Oil, Gas & Mining

Details of Final Reclamation

-This estimate is a modified version of the estimate provided by the operator
-This project involves patented claims, a state lease (SITLA) & access across USFS
-Most of the project area was previously disturbed by earlier mining operations
-Previous operations did not salvage topsoil or topsoil is unavailable due to rock outcrops
-All equipment and facilities will be removed during final reclamation
-Pit highwalls will remain benched; sefety berms and gates will prevent public access
-Remaining stockpiles and loose material will be regraded to 3h:1v configuration or less
-New roads will be regraded & receive revegetation treatments
-Reclaimed roads, pit floors & other surfaces will be riped to maximize infiltration
-All trash & debris will be removed from the site
-Revegetation will include scarifying/ripping, mulching, fertilizing & broadcast seeding
-Disturbed acreage: pit 13.0, slope 1.25, processing 4.5, existing road 1.5?, new road 1.5?
-Amount of disturbed area which will receive reclamation treatments 10.00 acres
-Estimated total disturbed area for the Parleys Canyon Mine = 21.75 acres

Activity	Quantity	Units	$/unit	$
Gates & signs (mtls & installation)	1	sum	700	700
Regrading processing area & loose mtls	2,000	CY	0.96	1,920
Safety berms on pit benches	480	CY	4.74	2,275
Sidecast mtl replacement - backhoe	380	CY	1.97	749
Ripping new pit access road	760	CY	1.45	1,102
Ripping pit floor	6,450	CY	1.30	8,385
Water bar construction	6.3	CY	1.97	12
Equipment removal - trucking	11.0	trips	345	3,795
Equipment removal - FE loader	2.0	days	1,050	2,100
Equipment removal - supervision	16.0	hours	30	480
Mulching (4-5 ton/acre)	10.0	acre	475	4,750
Fertilizing (160 lb/acre diammonium phosphate	10.0	acre	150	1,500
Broadcast seeding (11.5 lb/acre)	10.0	acre	67	670
General site cleanup & trash removal	10.0	acre	50	500
Reclamation/revegetation supervision(est 4 day	32.0	hours	30	960
		Subtotal		29,898
10% Contingency				2,990
		Subtotal		$32,888
Escalate for 5 years at 2.68% per yr				4,650
		Total		$37,538
		Rounded surety amount in yr 2000-$		**$37,500**

Average cost per disturbed acre = $1,724

shaded items added to operator's estimate by DOGM